



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,465	07/11/2003	Mark L. Buer	2875.0370001	5029

26111 7590 11/27/2006

STERNE, KESSLER, GOLDSTEIN & FOX PLLC
1100 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER

JOHNSON, CARLTON

ART UNIT PAPER NUMBER

2136

DATE MAILED: 11/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/617,465

Applicant(s)

BUER ET AL.

Examiner

Carlton Johnson

Art Unit

2136

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 1-24-2005/7-8-2005
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is responding to application papers filed **7-11-2003**.
2. Claims **1 - 31** are pending. Claims **1, 7 14, 20, 30** are independent.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(e) that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims **1 - 31** are rejected under 35 U.S.C. 102(e) as being anticipated by **Noehring et al. (US PG PUB No. 20020188839)**.

Regarding Claim 1, Noehring discloses a packet processing method comprising:

- a) receiving a plurality of packets; (see Noehring paragraph [0033], lines 3-5:
multiple packets processed)
- b) generating header information for the packets; (see Noehring paragraph [0030],
lines 5-7: generate header)
- c) adding the header information to the packets to generate encapsulated packets;
(see Noehring paragraph [0011], lines 12-15: add header) and

- d) distributing the encapsulated packets to a plurality of encryption processors. (see Noehring paragraph [0007], lines 1-3; paragraph [0007], lines 4-8; paragraph [0036], lines 1-2; paragraph [0036], lines 8-12: distribute encapsulated packet, multiple processors (i.e. encryption processors, RISC processors), encryption of packets)

Regarding Claim 2, Noehring discloses the method of claim 1 wherein the information comprises one or more of the group consisting of sequence number and byte count. (see Noehring paragraph [0030], lines 4-5: information, sequence number)

Regarding Claims 3, 10, Noehring discloses the method of claims 1, 7 wherein the encapsulated packets comprise IPsec packets. (see Noehring paragraph [0044], lines 18-20: encapsulation, IPSec packets utilized)

Regarding Claims 4, 11, Noehring discloses the method of claims 1, 7 wherein packets are encapsulated on a per-packet basis. (see Noehring paragraph [0044], lines 18-20: processing each packet)

Regarding Claims 5, 12, Noehring discloses the method of claims 1, 7 wherein the packets are not encapsulated using parallel processing. (see Noehring paragraph [0044], lines 18-20: packets encapsulated, no parallel processing utilized for encapsulation)

Regarding Claims 6, 13, Noehring discloses the method of claims 1, 7 wherein the packets are received from a host processor. (see Noehring paragraph [0043], lines 17-19: host processor)

Regarding Claims 7, Noehring discloses a packet processing method comprising:

- a) receiving a plurality of packets; (see Noehring paragraph [0033], lines 3-5: multiple packets)
- b) identifying security association information associated with the packets; (see Noehring paragraph [0030], lines 1-3: security association information for packets)
- c) retrieving the security association information from a data memory; (see Noehring paragraph [0009], lines 1-2; paragraph [0030], lines 1-3: retrieve information)
- d) modifying at least a portion of the security association information; (see Noehring paragraph [0030], lines 4-5: update information)
- e) adding header information to the packets to generate encapsulated packets, wherein the header information comprises the modified at least a portion of the security association information; (see Noehring paragraph [0011], lines 12-15: add header) and
- f) distributing the encapsulated packets to a plurality of encryption processors. (see Noehring paragraph [0007], lines 1-3; paragraph [0007], lines 4-8; paragraph [0036], lines 1-2; paragraph [0036], lines 8-12: distribute encapsulated packet,

multiple processors (i.e. encryption processors, RISC processors), encryption of packets)

Regarding Claims 8, 15, 29, 31, Noehring discloses the method, packet processing system of claims 7, 14, 28, 30 wherein the at least a portion of the security association information comprises one or more of the group consisting of sequence number and byte count. (see Noehring paragraph [0030], lines 4-5: information, sequence number)

Regarding Claims 9, Noehring discloses the method of claim 8 wherein a byte count retrieved from the data memory is modified by adding a length of an outer IP header and a security header. (see Noehring paragraph [0061], lines 3-4: length parameter computed for header)

Regarding Claims 14, Noehring discloses a packet processing method comprising:

- a) receiving a plurality of encrypted packets comprising header information; (see Noehring paragraph [0033], lines 3-5: multiple packets processed)
- b) distributing the encrypted packets to a plurality of decryption processors; (see Noehring paragraph [0007], lines 1-3; paragraph [0007], lines 4-8; paragraph [0036], lines 1-2; paragraph [0036], lines 8-12: multiple processors (i.e. encryption processors), distribute encapsulated packet, concurrent encryption on multiple packets)

- c) modifying, by a common processing component, at least a portion of the header information of the decrypted packets; (see Noehring paragraph [0030], lines 1-7: update (i.e. modify) sequence number, a portion of header information) and
- d) transmitting the decrypted packets. (see Noehring paragraph [0027], lines 24-28: output packets)

Regarding Claims 16, Noehring discloses the method of claim 14 wherein the encrypted packets comprise IPsec packets. (see Noehring paragraph [0027], lines 16-20: IPsec packet processing; paragraph [0031], lines 1-5: encryption)

Regarding Claims 17, Noehring discloses the method of claim 14 wherein the at least a portion of the header information is modified on a per-packet basis. (see Noehring paragraph [0030], lines 1-7: update (i.e. modify) portion of header information; paragraph [0006], lines 3-16: processing on a per-packet basis)

Regarding Claims 19, Noehring discloses the method of claim 14 wherein the packets are transmitted to a host processor. (see Noehring paragraph [0043], lines 17-19: host processor)

Regarding Claims 20, Noehring discloses a packet processing method comprising:

- a) receiving a plurality of encrypted packets; (see Noehring paragraph [0033], lines 3-5: multiple packets processed)

- b) identifying security association information associated with the packets; (see Noehring paragraph [0030], lines 1-5: security association information, sequence number)
- c) distributing the encrypted packets to a plurality of decryption processors to generate decrypted packets; (see Noehring paragraph [0007], lines 1-3; paragraph [0007], lines 4-8; paragraph [0036], lines 1-2; paragraph [0036], lines 8-12: distribute encapsulated packet, multiple processors (i.e. encryption processors, RISC processors); paragraph [0031], lines 5-7: decryption of packets)
- d) modifying, by a common processing component, at least a portion of the security association information; (see Noehring paragraph [0030], lines 1-5: sequence number updated) and
- e) transmitting the decrypted packets comprising the modified security association information. (see Noehring paragraph [0027], lines 24-28: output packets)

Regarding Claims 21, Noehring discloses the method of claim 20 wherein the at least a portion of the security association information comprises one or more of the group consisting of sequence number and byte count. (see Noehring paragraph [0030], lines 1-5: SAD (security association database) information, sequence number)

Regarding Claims 22, Noehring discloses the method of claim 20 wherein the encrypted packets comprise IPsec packets. (see Noehring paragraph [0027], lines 16-

28: IPSec packets processed ; paragraph [0031], lines 1-3; paragraph [0031], lines 5-7:
packet encryption utilized)

Regarding Claims 23, Noehring discloses the method of claim 20 further comprising:

- a) retrieving a first portion of the security association information from at least one data memory; (see Noehring paragraph [0030], lines 1-5: read (i.e. retrieve) security association information) and
- b) distributing the first portion of the security association information to the plurality of decryption processors. (see Noehring paragraph [0030], lines 1-7: distribute a portion (i.e. sequence number, header; paragraph [0007], lines 1-3; paragraph [0007], lines 4-8; paragraph [0036], lines 1-2; paragraph [0036], lines 8-12: distribute encapsulated packet, multiple processors (i.e. encryption processors, RISC processors); paragraph [0031], lines 5-7: decryption of packets))

Regarding Claims 24, Noehring discloses the method of claim 20 wherein the at least a portion of the security association information comprises at least one address associated with at least one updateable field in the security association information, the method further comprising:

- a) retrieving the at least a portion of the security association information from at least one data memory; (see Noehring paragraph [0009], lines 1-2: retrieve security association information) and

- b) distributing the at least a portion of the security association information to the plurality of decryption processors; (see Noehring paragraph [0030], lines 1-7: distribute a portion (i.e. sequence number, header; paragraph [0007], lines 1-3; paragraph [0007], lines 4-8; paragraph [0036], lines 1-2; paragraph [0036], lines 8-12: distribute encapsulated packet, multiple processors (i.e. encryption processors, RISC processors); paragraph [0031], lines 5-7: decryption of packets) and
- c) retrieving, according to the at least a portion of the security association information, the at least one updateable field from the at least one data memory. (see Noehring paragraph [0030], lines 1-5: updateable field, sequence number and byte count, read from memory or database)

Regarding Claims 25, Noehring discloses the method of claim 20 wherein the at least a portion of the security association information associated with the packets is modified on a per-packet basis. (see Noehring paragraph [0006], lines 3-16: processing on a packet basis)

Regarding Claims 26, Noehring discloses the method of claim 20 wherein the at least a portion of the security association information associated with the packets is not modified using parallel processing. (see Noehring paragraph [0011], lines 11-15: packets encapsulated; no parallel processing utilized for packet encapsulation)

Art Unit: 2136

Regarding Claims 27, Noehring discloses the method of claim 20 wherein the decrypted packets are transmitted to a host processor. (see Noehring paragraph [0028], lines 6-9: host processor interface)

Regarding Claims 28, Noehring discloses a packet processing system comprising:

- a) at least one media access controller for receiving a plurality of packets; (see Noehring paragraph [0033], lines 3-5: multiple packets processed)
- b) at least one data memory for storing security association information; (see Noehring see Noehring paragraph [0028], lines 12-16; paragraph [0047], lines 1-4; paragraph [0047], lines 14-18: database, security association information)
- c) a header processor for modifying at least a portion of the security association information and adding header information to the packets to generate encapsulated packets, wherein the header information comprises the modified at least a portion of the security association information; (see Noehring paragraph [0011], lines 11-15: add header; paragraph [0030], lines 1-5; paragraph [0030], lines 5-7: header information include updated sequence number, security association information) and
- d) a plurality of encryption processors for encrypting the encapsulated packets. (see Noehring paragraph [0007], lines 1-3; paragraph [0007], lines 4-8; paragraph [0036], lines 1-2; paragraph [0036], lines 8-12: multiple processors (i.e. encryption processors), distribute encapsulated packet, concurrent encryption on multiple packets)

Regarding Claims 30, Noehring discloses a packet processing system comprising:

- a) at least one media access controller for receiving a plurality of encrypted packets;
(see Noehring paragraph [0033], lines 3-5: multiple packets processed)
- b) at least one data memory for storing security association information; (see
Noehring paragraph [0028], lines 12-16; paragraph [0047], lines 1-4; paragraph
[0047], lines 14-18: database, security association information)
- c) a plurality of decryption processors for decrypting the encrypted packets to
generate decrypted packets; (see Noehring paragraph [0007], lines 1-3;
paragraph [0007], lines 4-8; paragraph [0036], lines 1-2; paragraph [0036], lines
8-12: multiple processors (i.e. encryption processors), distribute encapsulated
packet, concurrent encryption on multiple packets)
- d) a header processor for modifying at least a portion of the security association
information and modifying header information for the decrypted packets, wherein
the header information comprises the modified at least a portion of the security
association information. (see Noehring paragraph [0030], lines 1-5: modified
security association information (i.e. sequence number); paragraph [0030], lines
5-7: header generated)

Conclusion


Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Carlton Johnson whose telephone number is 571-270-

Art Unit: 2136

1032. The examiner can normally be reached Monday through Friday from 8:00AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nasser Moazzami, can be reached on 571-272-4195. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Carlton Johnson
November 15, 2006

NASSER MOAZZAMI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100


11/20/06